

International Workshop
«Fostering Ocean Innovations»
Naples, September 4, 2023

Mediterranean maritime port scenarios: the new challenges of sustainability

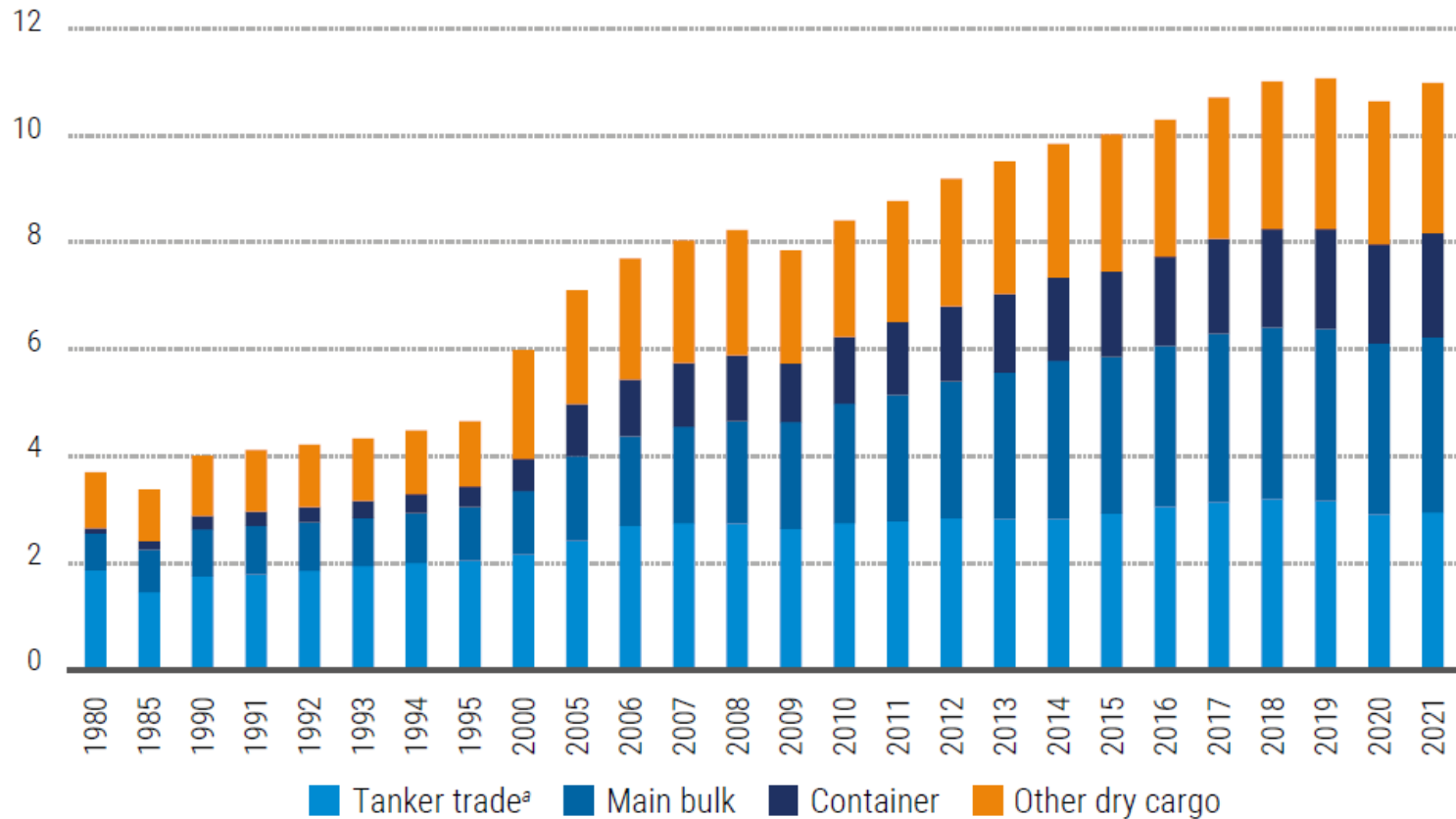
Alessandro Panaro

Head of Maritime & Energy Dept., SRM

Ports traffic in the world

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Figure 1.5 International maritime trade by cargo type, selected years
(billions of tons loaded)



Source: UNCTAD *Review of Maritime Transport*, various issues.

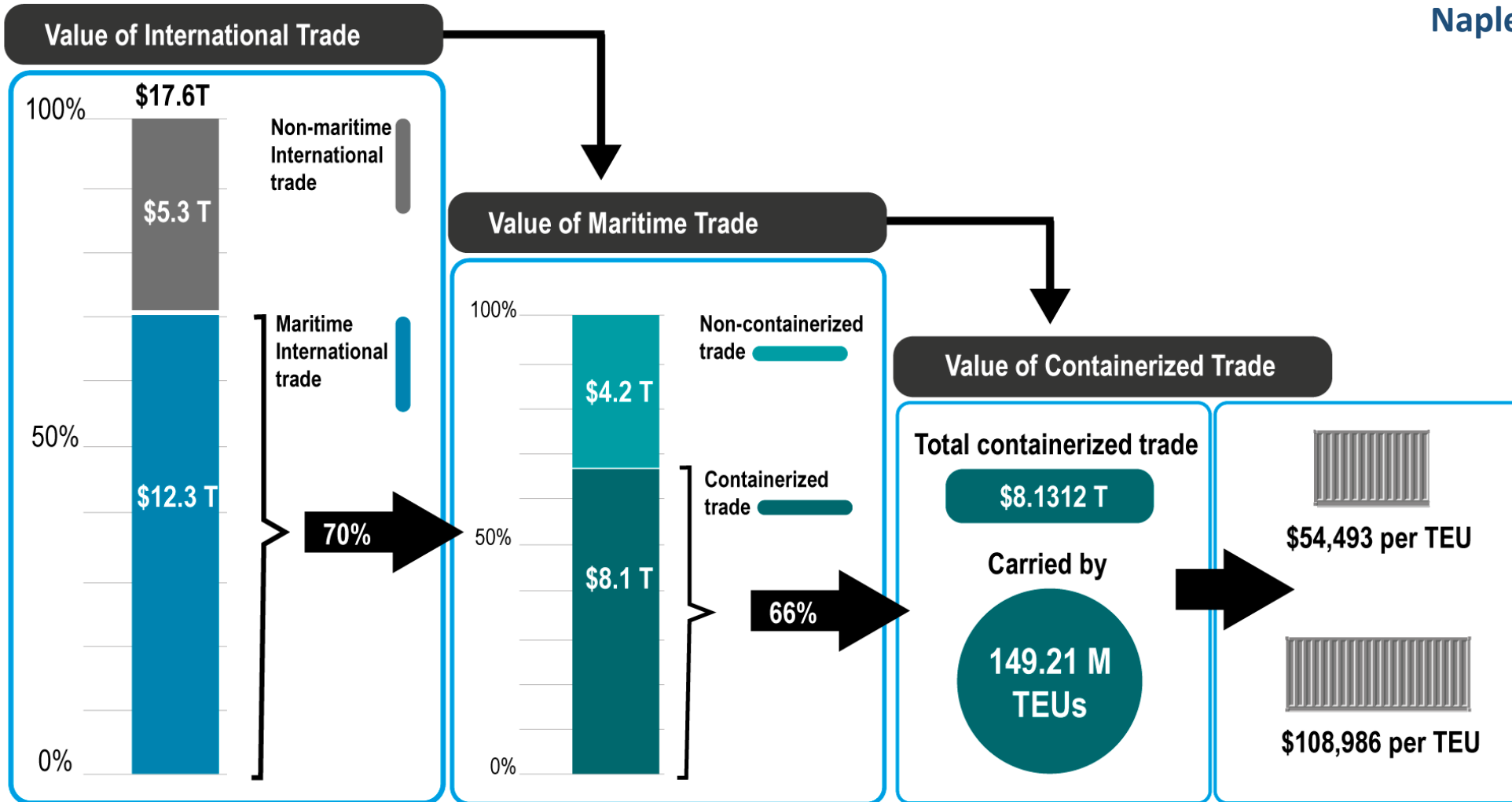
For 2006-2021, the breakdown by cargo type is based on Clarksons Research, *Shipping Review and Outlook*, Spring 2022 and Seaborne Trade Monitor, various issues.

Note: 1980-2005 figures for "Main bulk" include iron ore, grain, coal, bauxite/alumina, and phosphate. Starting in 2006, "Main bulk" includes iron ore, grain and coal only. Data relating to bauxite/alumina and phosphate are included under "Other dry cargo".

a) Tanker trade includes crude oil, refined petroleum products, gas and chemicals.

Value of maritime trade

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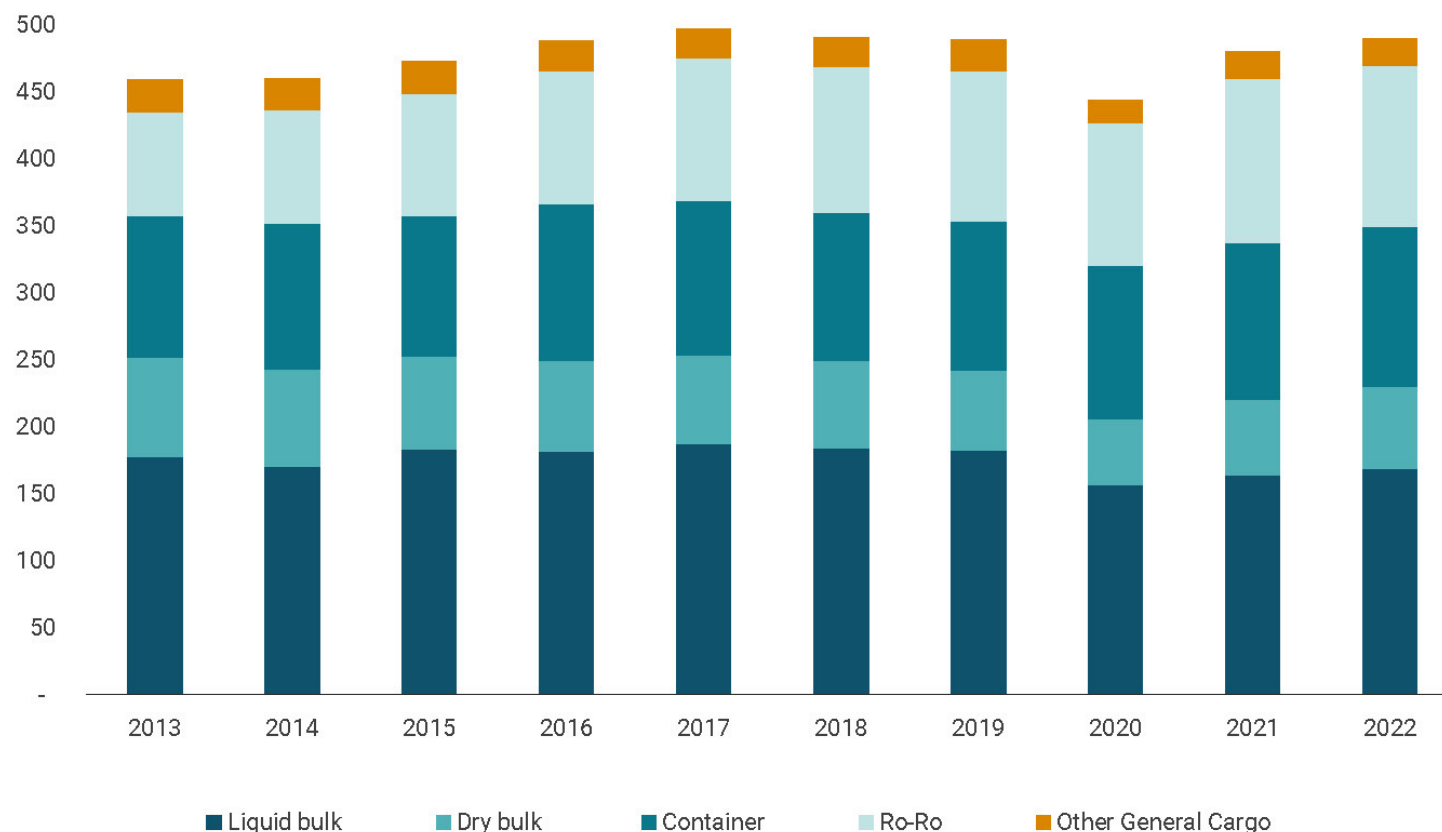
Source: Port Economics, Management and Policy, 2022

Outlook on Italian ports

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Goods handled by the Italian port system. Trend 2013-2022

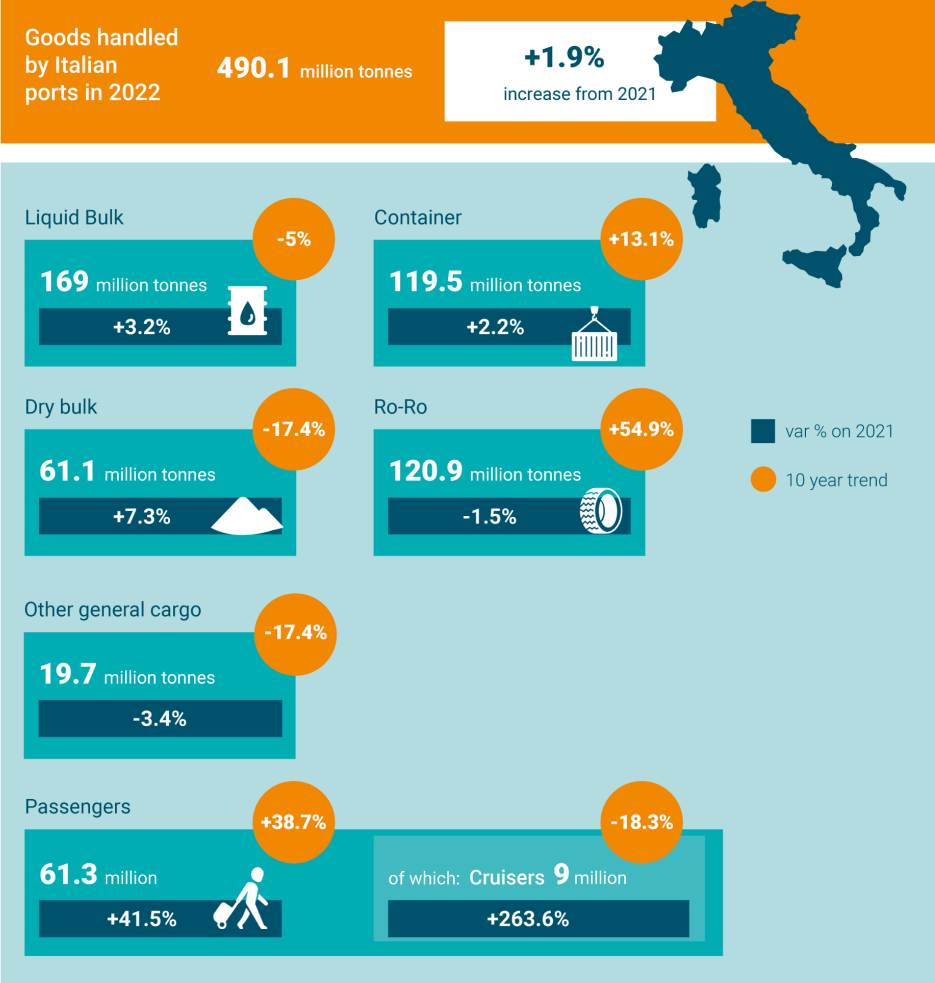
Million tonnes



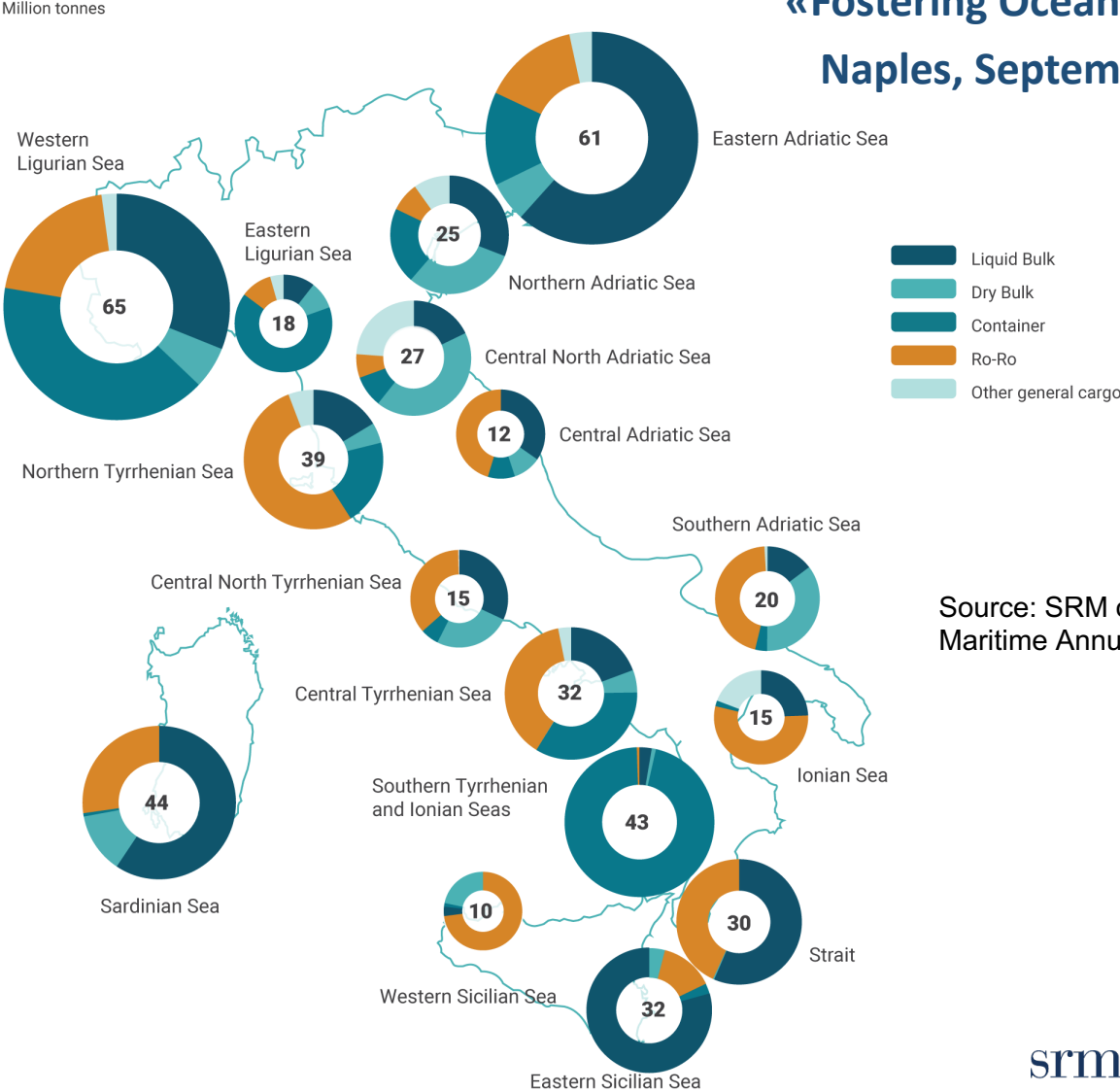
Source: SRM on Assoport.
 Maritime Annual Report 2023

Outlook on Italian ports

Goods (tonnes) and passengers (N) in the Italian port system by type between 2013 - 2022



Traffic of the 16 Port Network Authorities by type of goods handled



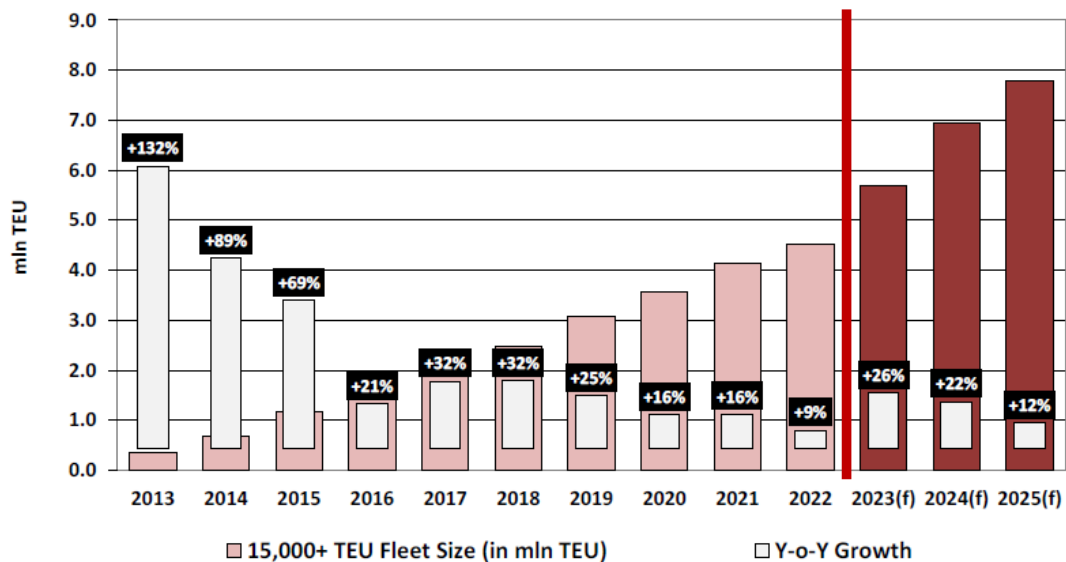
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Source: SRM on Assoporti. Maritime Annual Report 2023

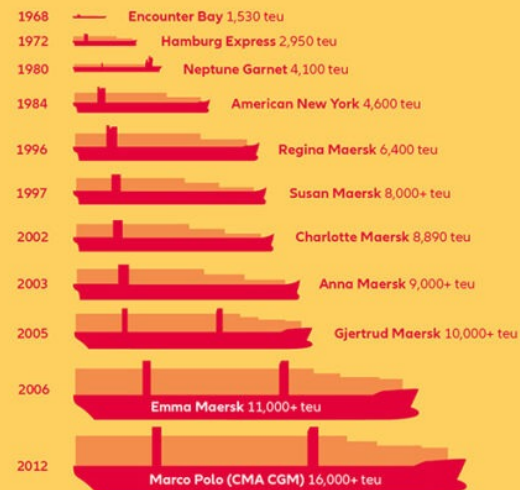
Naval gigantism in container sector

Projected Ultra Large Containership Fleet Growth

(Apr 2023 ; only units over 15,000 TEU ; in mln TEU ; after assuming slippage and demo)



50 YEARS OF CONTAINER SHIP GROWTH



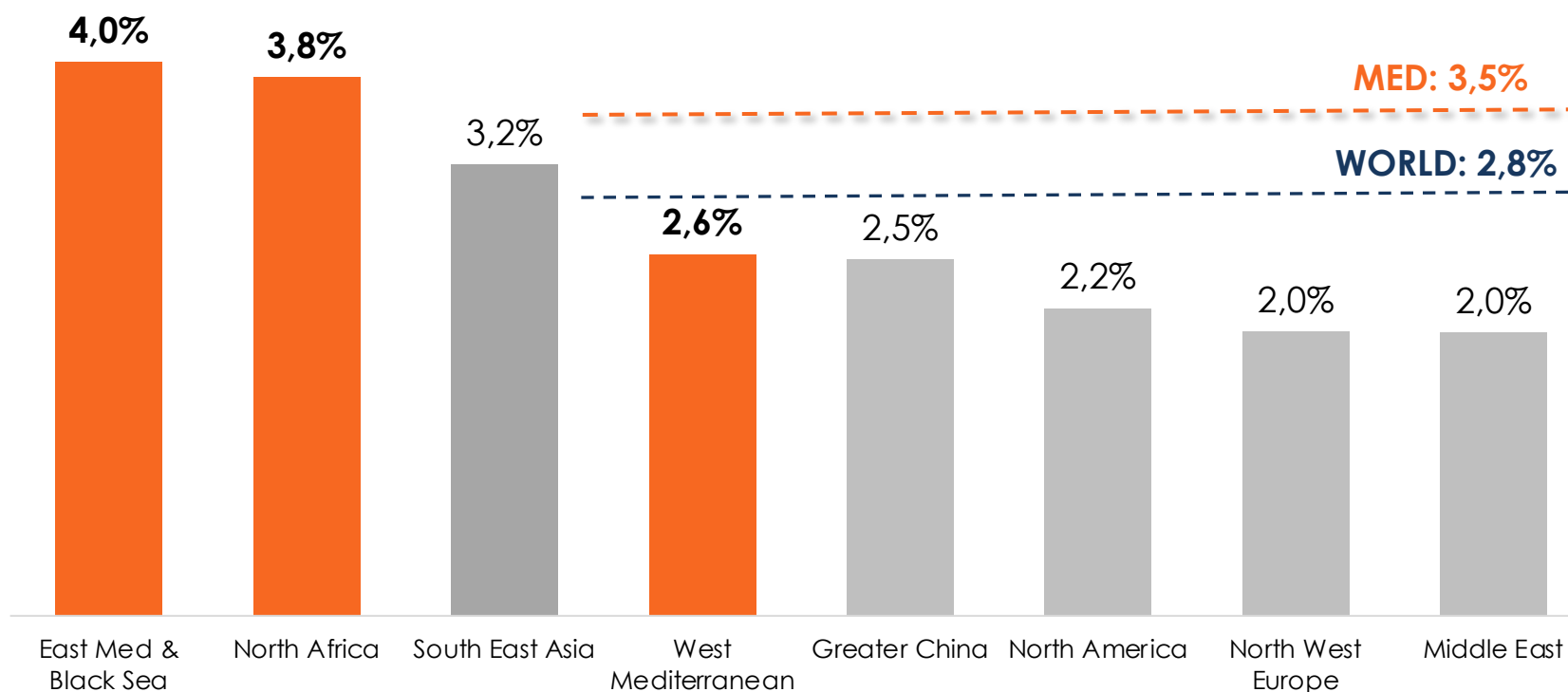
Container-carrying capacity has increased by around **1,500%** since 1968 and has almost doubled over the past decade



Source: Banchemo Costa

Mediterranean will continue to grow

Tasso di crescita media annua* 2022-2027 | Traffico container



- In the next 5 years the Med area will grow more than the world average and China and North America.

Fonte: SRM on Drewry

* (CAGR) Compound annual growth rate

The shipping transition: a new model of ships and ports

Global carbon dioxide (CO₂) emissions:
2.15%

Green ships



Alternative
 Fuels

5.2%
 fleet on the water in tonnage (GT)

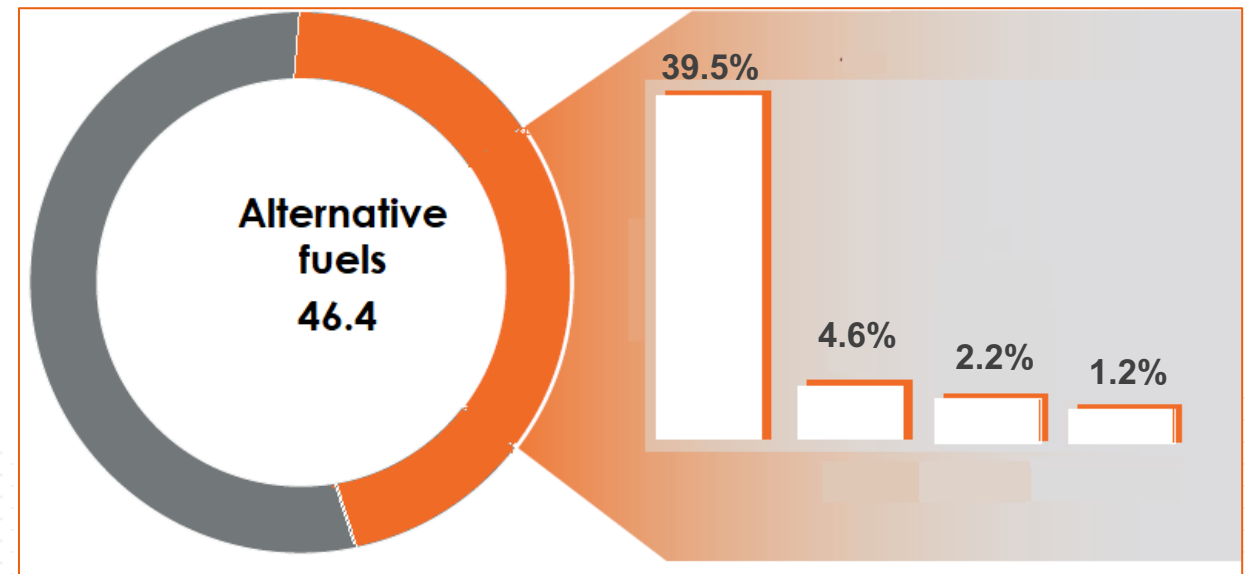
47.5%
 orderbook in tonnage (GT)



LNG Bunkering Ports

Green' port infrastructure is continuing to expand:
 currently **161 active** LNG bunkering ports
 (and **96 planned** facilities)

Of the total orderbook,
47.5% of tonnage is set to use **LNG**



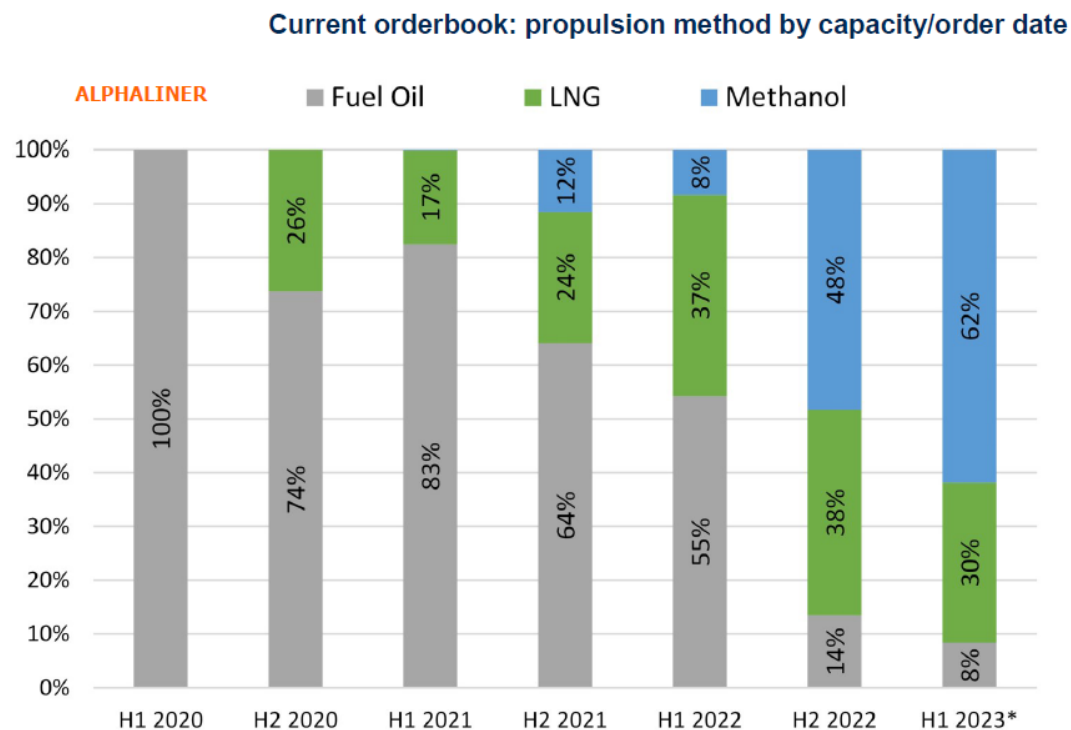
Source: SRM on Clarksons

The shipping transition: a new model of ships and ports

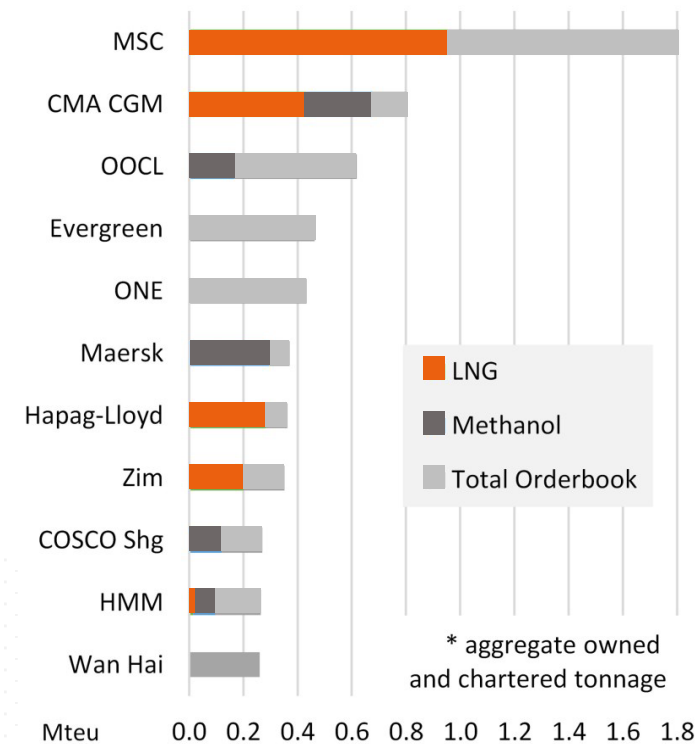
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Green ships



Fuel Oil, LNG and Methanol propulsion: orderbook by carrier*

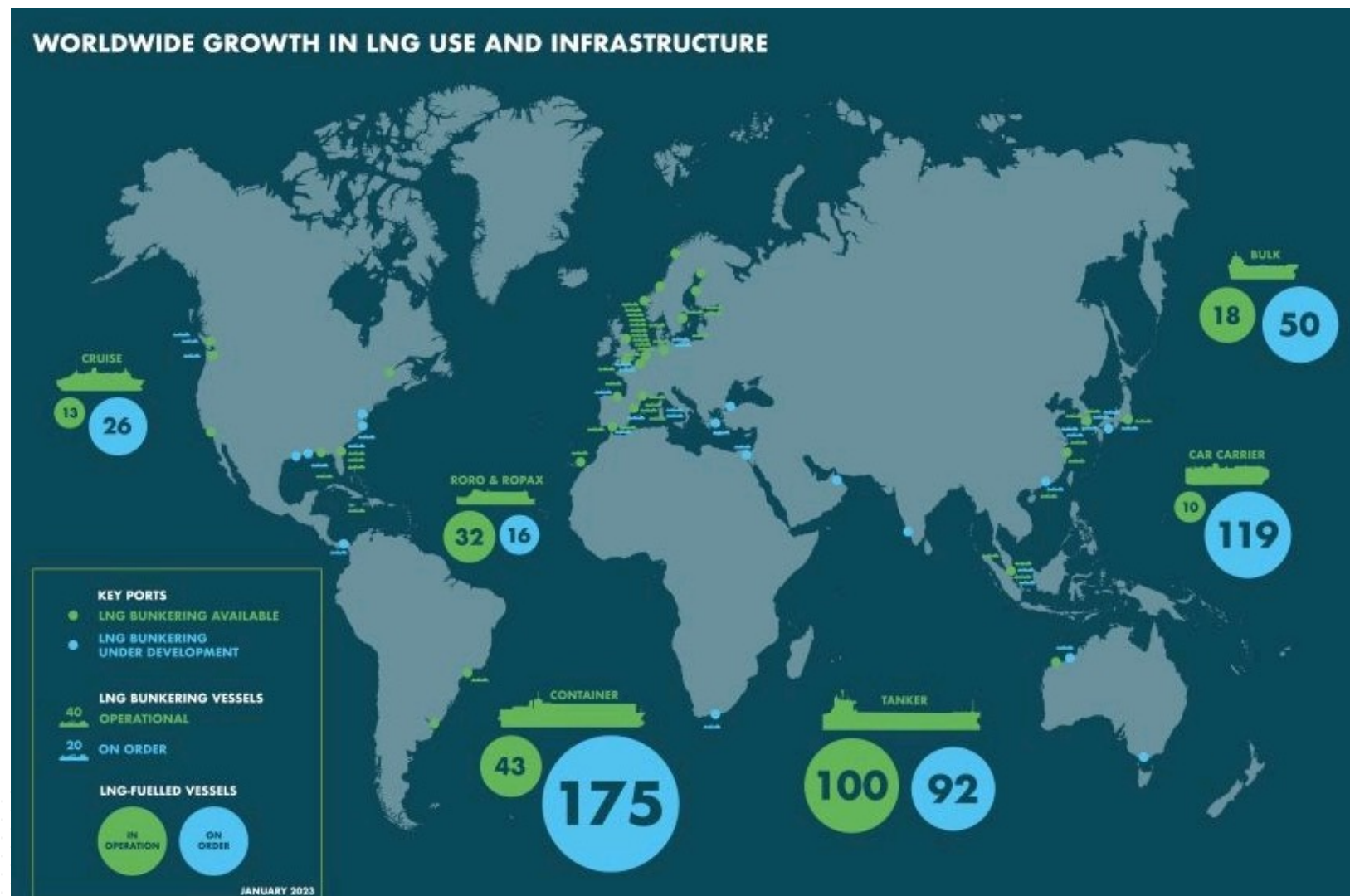


- Shipowners are ready to invest more and more in new generation vessels powered by alternative fuels which can make ships more efficient and reduce their environmental impact.
- An estimated \$3 trillion is needed to decarbonise the sector.

Source: SRM on Alphasiner

LNG In the World

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Source: Banchero Costa

LNG infrastructure in Europe

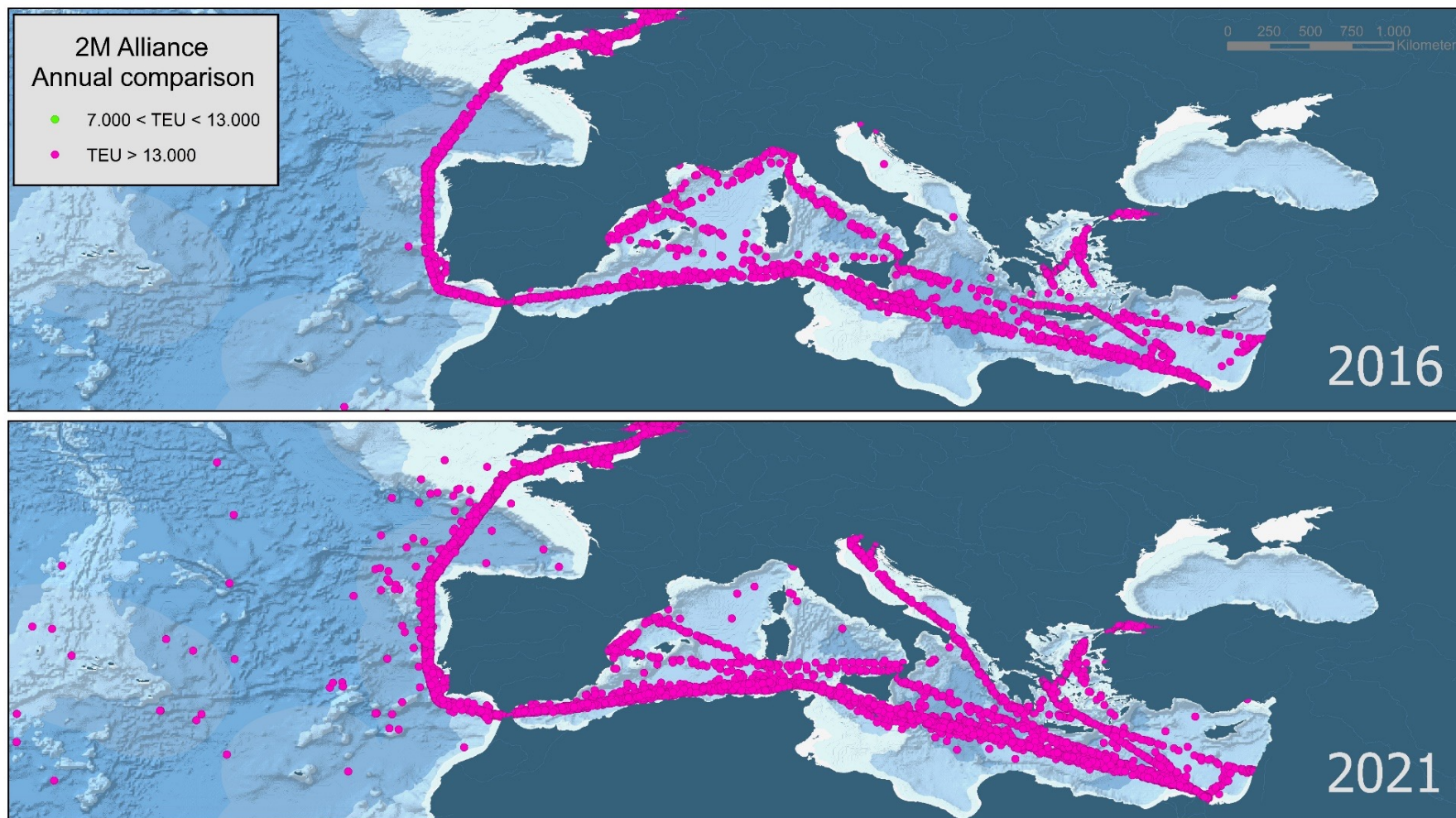
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Source: EU Commission

The routes of 2M Alliance – Mediterranean Sea (TEU > 13000)

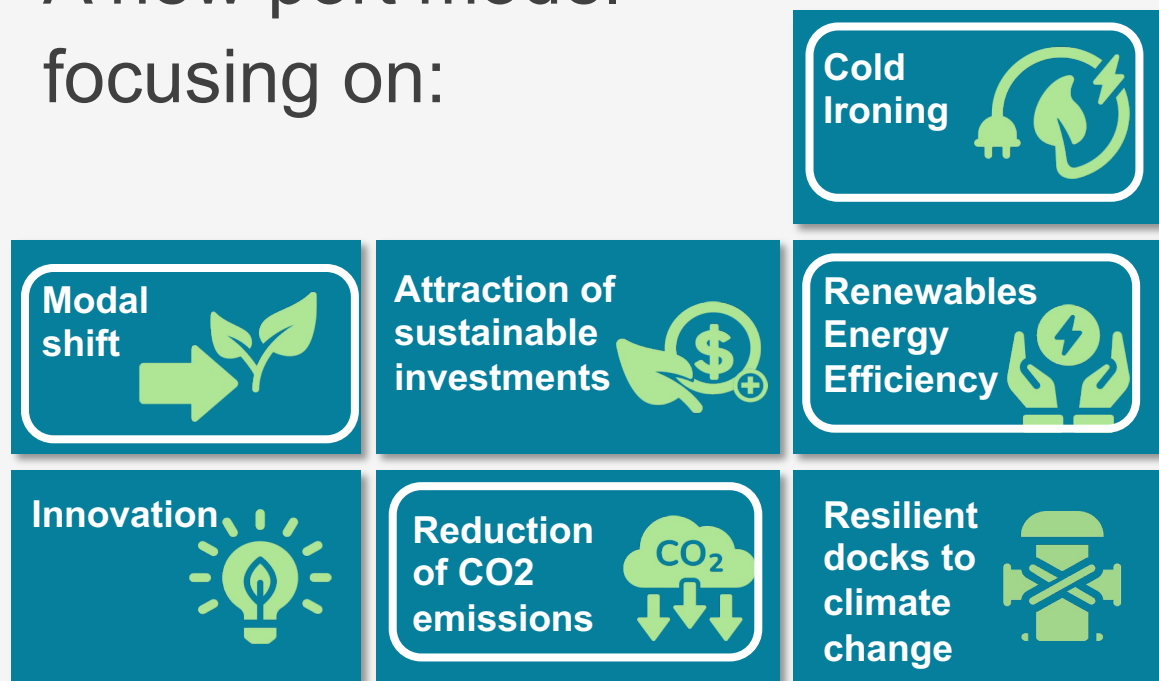
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Source: SRM

The Green Ports

A new port model
 focusing on:



Decarbonisation targets can be achieved not only thanks to the efforts of the shipping industry but also through:

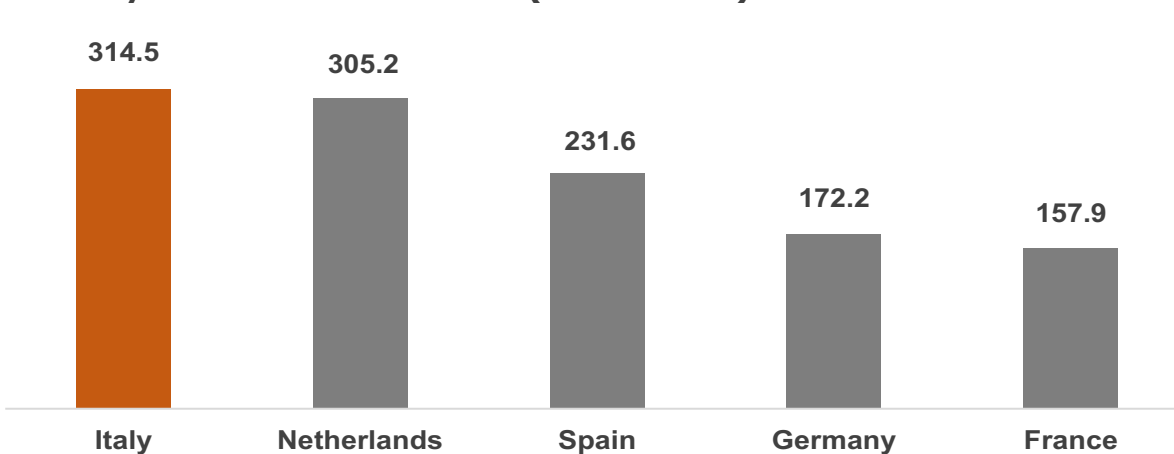
- ✓ **rail connectivity,**
- ✓ **development of SSS and Ro-Ro,**
- ✓ **Ports strategic hubs to foster the energy transition,**
- ✓ **9,2 billion euros of new investments in Italian Ports.**

Source: SRM

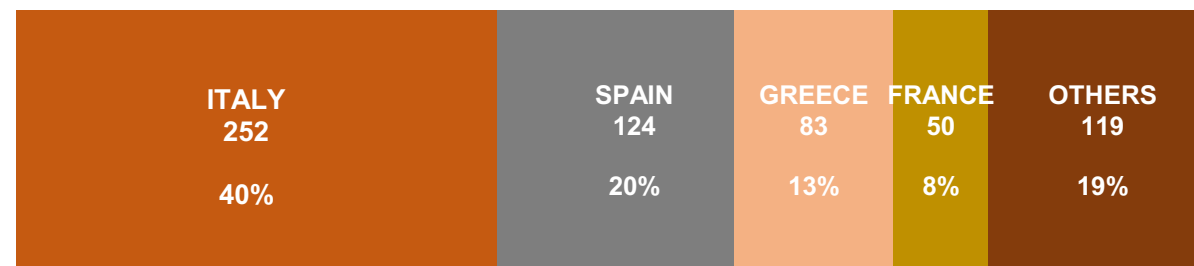
SSS Italy rank first in Euro-Med

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Italy is leader in EU27 SSS (Mln tonnes)



Goods handled in SSS in the Med area (Mln tonnes and % in total)



Source: SRM on Eurostat



Italy is leader in the EU for short routes, a more functional mode for achieving **sustainability** goals and implementing **regional supply chains**.

Gaining Sustainability through Ro-Ro (SRM-ALIS) in Europe

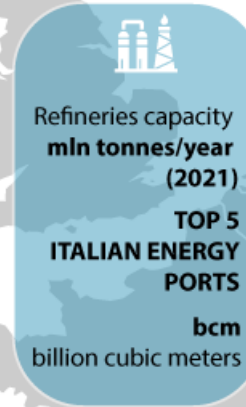
- **2.5 million trucks** moved from road to sea;
- **67 tonnes of goods** moved from road to sea;
- **2.8 million co2 abated over an 800 km route.**

Med Ports are not only logistics nodes ... but also strategic energy hubs

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Ports are

- **crucial infrastructure for regulating the functioning of the energy market:** they take on the role of primary locations for production, storage and trade of oil&gas;
- **entrance points of oil & gas pipelines** flowing into Southern Italy;
- **energy gateways:** refineries are access points to hydrocarbon transportation infrastructure and are usually located near ports; **Oil and Chemical need to be converted into biofuel and biochemical.**
- **Ports are close to energy-intensive industries where hydrogen can be use;**
- **energy communities:** they facilitate the energy transition process of shipping and logistics.



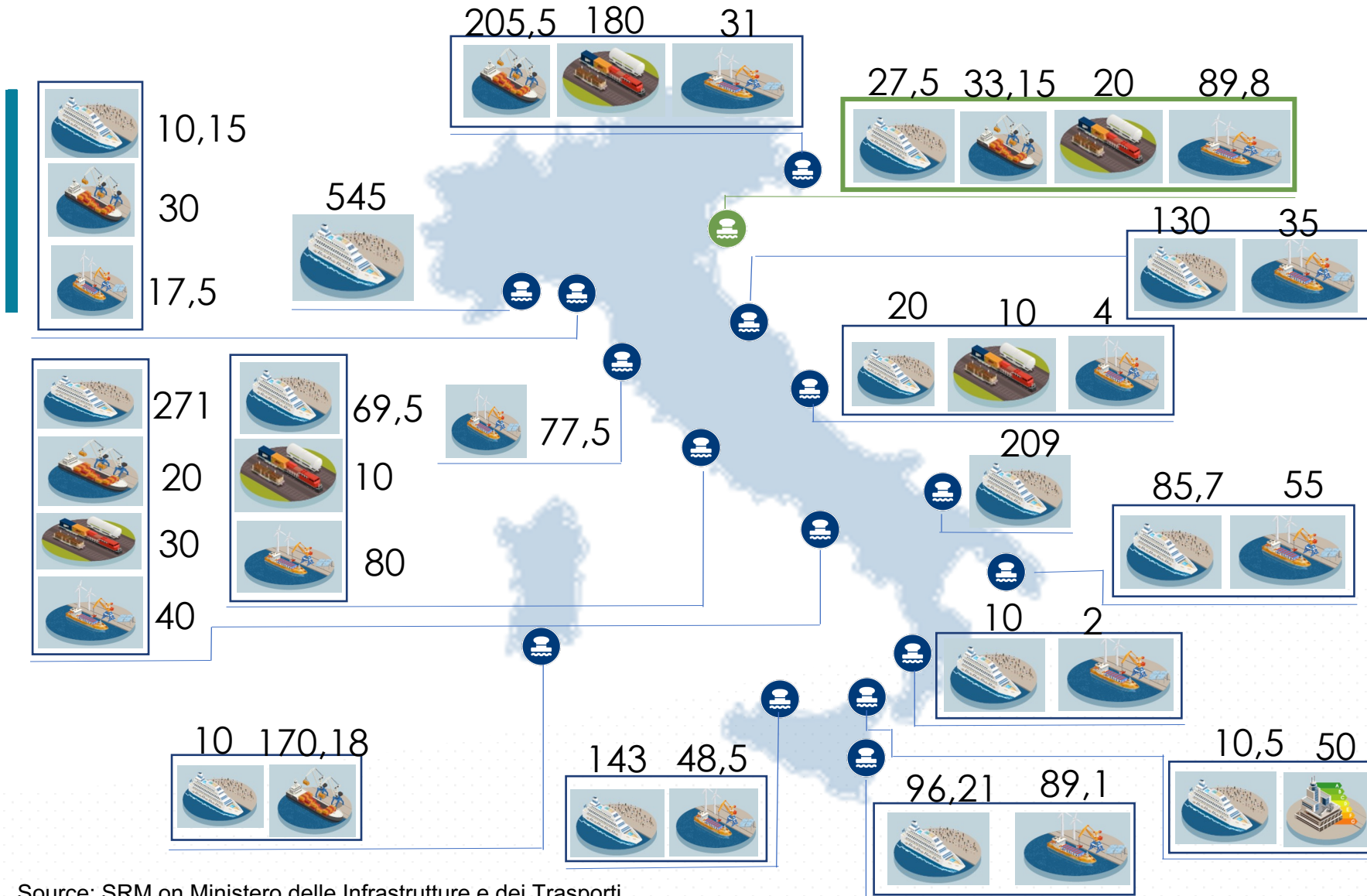
Source: SRM elaboration on
Assoporti and UNEM, 2022



North Africa is considered to be, in perspective, **a producer and exporter of green hydrogen** and other Power-to-X fuels due to its proximity to Europe and its abundant solar and wind energy

NRPP Funds for Italian Ports

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- Maritime accessibility
- Selective increase in port capacity
- Last/penultimate rail/road mile
- Energy efficiency
- Cold ironing

€ mln

Source: SRM on Ministero delle Infrastrutture e dei Trasporti

The new Simplified Logistic Zone: Venice is the first in Italy

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Source: SRM

Thank you for your attention



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